



SEQUENCE LISTING

<110> KIM, Jong-Bae

<120> CRUDE EXTRACT FROM *Viscum album coloratum*, AND PROTEINS
AND LECTINS ISOLATED THEREFROM

<130> Korean Mistletoe Lectin

<140> 09/627,165

<141> 2000-07-27

<160> 16

<210> 1

<211> 762

<212> DNA

<213> *Viscum album coloratum*

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 1

tacgagaggc taagactcag agttacgcat caaaccacgg gcgacgaata ttccgggttc 60
atcacgcttc tccgagatta tgtctcaagc ggaagctttt ccaatgagat accactcttg 120
cgtcagtcta cgtaccccggt ctcggatgcg caaagatttg tgttggtgga actcaccaat 180
cagggggggag actcgatcac ggccgccatc gacgttacta acctgtacgt ggtggcttac 240
caagcaggcg accaatccta ctttttgcgc gacgcaccag acggcgcgga aaggcatctc 300
ttcaccggca ccaccagatc ctccctccca ttcaccggaa gctacacaga tctggagcga 360
ttcgccggtc atagggacca gatccctctg gtagagagg aactcattca atccgtctcg 420
gcccttcgtt ttccgggcag caacactcgt gcccaagctc gttcctttat catcctcatt 480
cagatgatct ccgagggcgc cagattcaat cccatcttat ggagggtcgc ccaatacatt 540
agcagtggggg ggtcatttct gccagacacg tacattctcc agctggagac gagttggggg 600
caacaatcca cgcaagtca gactcgacg gatggcggtt ttaataacc aattcggttg 660
actatatcca ctggtgtctt cgtgacgttg agcaatgttc gcgacgtgat cgccagetta 720
gcgatcatgt tgtttgtatg cgaggaccgg ccatcttcct ct 762

<210> 2

<211> 254

<212> PRT

<213> *Viscum album coloratum*

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 2

Tyr Glu Arg Leu Arg Leu Arg Val Thr His Gln Thr Thr Gly Asp Glu
1 5 10 15

Tyr Phe Arg Phe Ile Thr Leu Leu Arg Asp Tyr Val Ser Ser Gly Ser
20 25 30

Phe Ser Asn Glu Ile Pro Leu Leu Arg Gln Ser Thr Ile Pro Val Ser
35 40 45

Asp Ala Gln Arg Phe Val Leu Val Glu Leu Thr Asn Gln Gly Gly Asp
50 55 60

Ser Ile Thr Ala Ala Ile Asp Val Thr Asn Leu Tyr Val Val Ala Tyr
65 70 75 80

Gln Ala Gly Asp Gln Ser Tyr Phe Leu Arg Asp Ala Pro Asp Gly Ala
85 90 95

Glu Arg His Leu Phe Thr Gly Thr Thr Arg Ser Ser Leu Pro Phe Thr
100 105 110

Gly Ser Tyr Thr Asp Leu Glu Arg Phe Ala Gly His Arg Asp Gln Ile
115 120 125

Pro Leu Gly Arg Glu Glu Leu Ile Gln Ser Val Ser Ala Leu Arg Phe
130 135 140

Pro Gly Ser Asn Thr Arg Ala Gln Ala Arg Ser Phe Ile Ile Leu Ile
145 150 155 160

Gln Met Ile Ser Glu Ala Ala Arg Phe Asn Pro Ile Leu Trp Arg Ala
165 170 175

Arg Gln Tyr Ile Ser Ser Gly Gly Ser Phe Leu Pro Asp Thr Tyr Ile
180 185 190

Leu Gln Leu Glu Thr Ser Trp Gly Gln Gln Ser Thr Gln Val Gln His
195 200 205

Ser Thr Asp Gly Val Phe Asn Asn Pro Ile Arg Leu Thr Ile Ser Thr
210 215 220

Gly Val Phe Val Thr Leu Ser Asn Val Arg Asp Val Ile Ala Ser Leu
 225 230 235 240

Ala Ile Met Leu Phe Val Cys Glu Asp Arg Pro Ser Ser Ser
 245 250

<210> 3
 <211> 762
 <212> DNA
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 3
 tacgagaggc taagactcag agttacgcat caaaccacgg gcgaccaata ttcaagttc 60
 atcacgcttc tccgagatca tgtctcaagc ggaagcttgt ccaatcaaat accactcttg 120
 cggcagtcta ctgtcccgct ctcgatacag cagagatttg tgttggtgga actcagcaat 180
 caggggggag actcgatcac ggccgccatc gacgttacca atctgtacgt ggtggcttac 240
 caagcaggca accaatccta cttttgcgc gacgcacctc gcggcgcgga aacgtatctc 300
 ttcaccggca ccaccgac ctctctccca ttcaacggaa gctaccctga tctggagcga 360
 tacgccggac atagggacca gatccctctc ggtatagacc aactcattca atcgtctcg 420
 gcccttcgtt ttccgggcag caacactcgt gcccaagctc gttcctttat cactctcatt 480
 cagatgatct ccgaggccgc cagattcaat cccatcttat ggagggtctg ccaatacatt 540
 agcagtgggg ggtcatttct gccagacacg tacattctcc agctggagac gagttggggg 600
 caacaatcca cgcaagtcca gcactcgacg gatggcggtt ttaataacc aattcggttg 660
 actatatcca ctggtgtctt cgtgacgttg agcaatgttc gcgacgtgat cgccagcyta 720
 gcgatcatgt tgtttgtatg cgaggaccgg ccatcttcct ct 762

<210> 4
 <211> 254
 <212> PRT
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 4
 Tyr Glu Arg Leu Arg Leu Arg Val Thr His Gln Thr Thr Gly Asp Gln
 1 5 10 15

Tyr Phe Lys Phe Ile Thr Leu Leu Arg Asp His Val Ser Ser Gly Ser
 20 25 30

Leu Ser Asn Gln Ile Pro Leu Leu Arg Gln Ser Thr Val Pro Val Ser
 35 40 45

Asp Thr Gln Arg Phe Val Leu Val Glu Leu Ser Asn Gln Gly Gly Asp
 50 55 60

Ser Ile Thr Ala Ala Ile Asp Val Thr Asn Leu Tyr Val Val Ala Tyr
 65 70 75 80

Gln Ala Gly Asn Gln Ser Tyr Phe Leu Arg Asp Ala Pro Arg Gly Ala
 85 90 95

Glu Thr Tyr Leu Phe Thr Gly Thr Thr Arg Ser Ser Leu Pro Phe Asn
 100 105 110

Gly Ser Tyr Pro Asp Leu Glu Arg Tyr Ala Gly His Arg Asp Gln Ile
 115 120 125

Pro Leu Gly Ile Asp Gln Leu Ile Gln Ser Val Ser Ala Leu Arg Phe
 130 135 140

Pro Gly Ser Asn Thr Arg Ala Gln Ala Arg Ser Phe Ile Ile Leu Ile
 145 150 155 160

Gln Met Ile Ser Glu Ala Ala Arg Phe Asn Pro Ile Leu Trp Arg Ala
 165 170 175

Arg Gln Tyr Ile Ser Ser Gly Gly Ser Phe Leu Pro Asp Thr Tyr Ile
 180 185 190

Leu Gln Leu Glu Thr Ser Trp Gly Gln Gln Ser Thr Gln Val Gln His
 195 200 205

Ser Thr Asp Gly Val Phe Asn Asn Pro Ile Arg Leu Thr Ile Ser Thr
 210 215 220

Gly Val Phe Val Thr Leu Ser Asn Val Arg Asp Val Ile Ala Ser Xaa
 225 230 235 240

Ala Ile Met Leu Phe Val Cys Glu Asp Arg Pro Ser Ser Ser
 245 250

<210> 5
 <211> 768
 <212> DNA
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 5
 tacgagaggc taagactcag agttacgcat caaaccacgg gcgacgaata ttccgggtc 60
 atcaagcttc tccgagactc tgtctcaagc ggaagctttt ccaatgacat accgctcctg 120
 cctccgtcaa tcccgggtctc ctctgcgcag agatttgtgt tggaggaaact cacaaatcag 180
 ttgggaaagt gggaagactc gatcacggcc gccatcgacg ttaccaatct gtacgtggtg 240
 gcttaccag caggcgacca atcctacttt ttgcgcgacg caccagacgg cgcggaaagg 300
 catctcttca cgggcaccac cagatcctct ctctctttca acggaagcta cgctgatctg 360
 gagcggtagc cgggacatag ggaccggatc cctctgggta gagagccact catacgatcc 420
 gtctcggcgc ttgattatcc cggcggcagc acgcgcgccc aagccagttc cattattatc 480
 gtcattcaga tgatctccga ggccggccaga ttcaatccca tcctatggag ggctcgccaa 540
 tacattaaca gtggggtgtc atatcttcca gacgtgtaca tgctggagct ggaggcgagt 600
 tggggccaac aatcgacca agtcagcag tcgaccgatg gcgtttttaa taaccaatt 660
 cggttgggta tatccaccgg caactcgtg tggttgagca atgttcgca cgtgatcgcc 720
 agcttgggga tcatgggtgt tgatgcagg gaccggtcat ctccctct 768

<210> 6
 <211> 256
 <212> PRT
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 6
 Tyr Glu Arg Leu Arg Leu Arg Val Thr His Gln Thr Thr Gly Asp Glu
 1 5 10 15
 Tyr Phe Arg Phe Ile Lys Leu Leu Arg Asp Ser Val Ser Ser Gly Ser
 20 25 30
 Phe Ser Asn Asp Ile Pro Leu Leu Pro Pro Ser Ile Pro Val Ser Ser
 35 40 45
 Ala Gln Arg Phe Val Leu Val Glu Leu Thr Asn Gln Leu Gly Lys Trp
 50 55 60

Glu Asp Ser Ile Thr Ala Ala Ile Asp Val Thr Asn Leu Tyr Val Val
 65 70 75 80
 Ala Tyr Gln Ala Gly Asp Gln Ser Tyr Phe Leu Arg Asp Ala Pro Asp
 85 90 95
 Gly Ala Glu Arg His Leu Phe Thr Gly Thr Thr Arg Ser Ser Leu Pro
 100 105 110
 Phe Asn Gly Ser Tyr Ala Asp Leu Glu Arg Tyr Ala Gly His Arg Asp
 115 120 125
 Arg Ile Pro Leu Gly Arg Glu Pro Leu Ile Arg Ser Val Ser Ala Leu
 130 135 140
 Asp Tyr Pro Gly Gly Ser Thr Arg Ala Gln Ala Ser Ser Ile Ile Ile
 145 150 155 160
 Val Ile Gln Met Ile Ser Glu Ala Ala Arg Phe Asn Pro Ile Leu Trp
 165 170 175
 Arg Ala Arg Gln Tyr Ile Asn Ser Gly Val Ser Tyr Leu Pro Asp Val
 180 185 190
 Tyr Met Leu Glu Leu Glu Ala Ser Trp Gly Gln Gln Ser Thr Gln Val
 195 200 205
 Gln Gln Ser Thr Asp Gly Val Phe Asn Asn Pro Ile Arg Leu Gly Ile
 210 215 220
 Ser Thr Gly Asn Phe Val Trp Leu Ser Asn Val Arg Asp Val Ile Ala
 225 230 235 240
 Ser Leu Gly Ile Met Val Phe Val Cys Arg Asp Arg Ser Ser Ser Pro
 245 250 255

<210> 7
 <211> 797
 <212> DNA

<213> Viscum album coloratum

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 7

acgatgtaac ctgcactact tccgaaccta cggtagcggtt tgtgggtcga aatggcctgt 60
gtctcgacgt cccagagggc gattaccacg atggaagtcg gatacagttg tggccctgca 120
agtccaactc cgatcagaat cagctgtgga cgatcagaag ggatggaacc attcgatcta 180
atggaagggtg cttgacgacc tatgggtata ctgcgggcag ctatataatg atctacgact 240
gtaataaggg ggggtgggac cttactactt ggcagataag gggcaatgga atcatcctta 300
atccaagatc catgatgggtg atcggaacac catccgggag ccgcggaacc cgtggcacta 360
cttttactct gcaaacactg gggtactcat taggacaggg ctggcttgcc agcaatgata 420
ccgctcctcg cgaggttaacc atatatggtt tccgcgatca ttgcatggaa actagtggag 480
ggaaagtgtg gggtgggact tgtgtgagtg gcaagcagaa ccaaagatgg gctttgtacg 540
gggatgggtc cattcgcccg aaaccttacc aagaccaatg cctcacctct caggagact 600
ccgtagatc cgtaatcaat ttatttagct gcaccgctgg atcgccaagg caacgatggg 660
tatttaccaa taaaggggcc attttgaatt taaagaatag gttggccatg gatgtggcgg 720
aatcaaatcc aagcctccgc cgaataatca tctttcagt cactggaaat ccaaatcaaa 780
tgtggcttc cgtgcc

797

<210> 8

<211> 266

<212> PRT

<213> Viscum album coloratum

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 8

Asp Asp Val Thr Cys Thr Thr Ser Glu Pro Thr Val Arg Phe Val Gly
1 5 10 15

Arg Asn Gly Leu Cys Leu Asp Val Pro Glu Gly Asp Tyr His Asp Gly
20 25 30

Ser Arg Ile Gln Leu Trp Pro Cys Lys Ser Asn Ser Asp Gln Asn Gln
35 40 45

Leu Trp Thr Ile Arg Arg Asp Gly Thr Ile Arg Ser Asn Gly Arg Cys
50 55 60

Leu Thr Thr Tyr Gly Tyr Thr Ala Gly Ser Tyr Ile Met Ile Tyr Asp
65 70 75 80

Cys Asn Arg Gly Gly Trp Asp Leu Thr Thr Trp Gln Ile Arg Gly Asn
85 90 95

Gly Ile Ile Leu Asn Pro Arg Ser Met Met Val Ile Gly Thr Pro Ser
100 105 110

Gly Ser Arg Gly Thr Arg Gly Thr Thr Phe Thr Leu Gln Thr Leu Gly
115 120 125

Tyr Ser Leu Gly Gln Gly Trp Leu Ala Ser Asn Asp Thr Ala Pro Arg
130 135 140

Glu Val Thr Ile Tyr Gly Phe Arg Asp His Cys Met Glu Thr Ser Gly
145 150 155 160

Gly Lys Val Trp Val Gly Thr Cys Val Ser Gly Lys Gln Asn Gln Arg
165 170 175

Trp Ala Leu Tyr Gly Asp Gly Ser Ile Arg Pro Lys Pro Tyr Gln Asp
180 185 190

Gln Cys Leu Thr Ser Gln Gly Asp Ser Val Arg Ser Val Ile Asn Leu
195 200 205

Phe Ser Cys Thr Ala Gly Ser Pro Arg Gln Arg Trp Val Phe Thr Asn
210 215 220

Lys Gly Ala Ile Leu Asn Leu Lys Asn Arg Leu Ala Met Asp Val Ala
225 230 235 240

Glu Ser Asn Pro Ser Leu Arg Arg Ile Ile Ile Phe Ser Val Thr Gly
245 250 255

Asn Pro Asn Gln Met Trp Leu Pro Val Pro
260 265

<210> 9

<211> 789

<212> DNA

<213> Viscum album coloratum

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 9

gacgatggta cctgcactgc ttccgaacct acggtgcgga ttgtgggtct aaatggcctg 60
tgcgtcgacg tccgaaatgg aaaattccac gatggaaatc cgatacagtt gtggccctgc 120
aagtccaaca ccgataggaa tcagctgtgg acgatcagaa gggatggaac cattcgatct 180
aatagcaagt gcttgaccac ctatggctat cgtgatggca tgtatgtaat gatctacaac 240
tgaatacgg ccggtcggga ggccactatt tggcaaata gggaaaatgg aaccatcgtt 300
aatccaagat ccagtctggt actgggagca gcatctggaa acagccgcac taggcttact 360
gtgcaaacac aggcttactc gttgggacag ggctggcttg ccagcaatga taccgcccct 420
cgcgaggtaa ccatatacgg attccgtgac cttgcatgg aagctaattg atcgagtgtg 480
tgggtggaga cttgtgtgag taacaagcag aacaaaaat gggctttgta cggggatggt 540
tctatacgcc ccaaacaaaa ccgaaaccaa tgcctcacct gccagaaaga ctccgttca 600
accgtaatca atattgttag ctgcagcgca ggcgtcttg ggcagcgatg ggtgtttacc 660
aataaaggga ccattttgaa tttaaagaat gggttgtgca tggatgtggc gcaatcaa 720
ccaagcctcc gccgaataat catctacca gccaccggaa agcctaata aatgtggctt 780
cccgtgcca 789

<210> 10

<211> 263

<212> PRT

<213> Viscum album coloratum

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 10

Asp Asp Gly Thr Cys Thr Ala Ser Glu Pro Thr Val Arg Ile Val Gly
1 5 10 15

Leu Asn Gly Leu Cys Val Asp Val Arg Asn Gly Lys Phe His Asp Gly
20 25 30

Asn Pro Ile Gln Leu Trp Pro Cys Lys Ser Asn Thr Asp Arg Asn Gln
35 40 45

Leu Trp Thr Ile Arg Arg Asp Gly Thr Ile Arg Ser Asn Ser Lys Cys
50 55 60

Leu Thr Thr Tyr Gly Tyr Arg Asp Gly Met Tyr Val Met Ile Tyr Asn
65 70 75 80

Cys Asn Thr Ala Val Arg Glu Ala Thr Ile Trp Gln Ile Trp Glu Asn
85 90 95

Gly Thr Ile Val Asn Pro Arg Ser Ser Leu Val Leu Gly Ala Ala Ser
100 105 110

Gly Asn Ser Arg Thr Arg Leu Thr Val Gln Thr Gln Ala Tyr Ser Leu
115 120 125

Gly Gln Gly Trp Leu Ala Ser Asn Asp Thr Ala Pro Arg Glu Val Thr
130 135 140

Ile Tyr Gly Phe Arg Asp Leu Cys Met Glu Ala Asn Gly Ser Ser Val
145 150 155 160

Trp Val Glu Thr Cys Val Ser Asn Lys Gln Asn Gln Lys Trp Ala Leu
165 170 175

Tyr Gly Asp Gly Ser Ile Arg Pro Lys Gln Asn Arg Asn Gln Cys Leu
180 185 190

Thr Cys Gln Lys Asp Ser Val Ser Thr Val Ile Asn Ile Val Ser Cys
195 200 205

Ser Ala Gly Ser Ser Gly Gln Arg Trp Val Phe Thr Asn Lys Gly Thr
210 215 220

Ile Leu Asn Leu Lys Asn Gly Leu Val Met Asp Val Ala Gln Ser Asn
225 230 235 240

Pro Ser Leu Arg Arg Ile Ile Ile Tyr Pro Ala Thr Gly Lys Pro Asn
245 250 255

Gln Met Trp Leu Pro Val Pro
260

<210> 11

<211> 789

<212> DNA

<213> Viscum album coloratum

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 11

gacgatggaa cctgcactcc ttccgaacct acggtgtgga ttgtgggtct aaatggcctg 60

tgcgtcgacg tccgacatgg aaaattccac gatggaaatc cgatacagtt gtggccctgc 120
 aagccaaca ccgataggaa tcagctgtgg acgatcagaa gggatggaac cattcgatct 180
 aatagcaagt gcttgaccac ctatggctat cgtgatggca tgtatgtcat gatctacaac 240
 tgtaatacgg ccgtgcggga ggccactatt tggcaaatat gggaaaatgg aaccatcgtt 300
 aatccaaaat ccagtctggt actgggagca gcatctggaa gcagccgcac tacgcttact 360
 gtgcaaacac aggcttactc gttgggacag ggctggcttg ccagccatga tacagcccct 420
 cgcgaggtaa ccatatacgg ttccgtgac ctttgcattg aagctaattg atcgagtgtg 480
 tkgggtgaga cttgtgtgag tcacaagcag aacaaaaat gggctttgta cggggatggt 540
 tctatacgcc ccaaacaaaa ccgaaaccaa tgcctcacct gccagaaaga ctccgtttca 600
 accgtaatca atattgtag ctgcagcgca ggatcgtctg ggcagcgatg ggtgtttacc 660
 aataaaggga ccattttgaa tttaaagaat gggttggctc tggatgtggc gcaatcaaat 720
 ccaagcctcc gccgaataat catctacca gccaccgga agcctaata aatgtggctt 780
 cccgtgcc

789

<210> 12
 <211> 263
 <212> PRT
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 12
 Asp Asp Gly Thr Cys Thr Pro Ser Glu Pro Thr Val Trp Ile Val Gly
 1 5 10 15
 Leu Asn Gly Leu Cys Val Asp Val Arg His Gly Lys Phe His Asp Gly
 20 25 30
 Asn Pro Ile Gln Leu Trp Pro Cys Lys Ser Asn Thr Asp Arg Asn Gln
 35 40 45
 Leu Trp Thr Ile Arg Arg Asp Gly Thr Ile Arg Ser Asn Ser Lys Cys
 50 55 60
 Leu Thr Thr Tyr Gly Tyr Arg Asp Gly Met Tyr Val Met Ile Tyr Asn
 65 70 75 80
 Cys Asn Thr Ala Val Arg Glu Ala Thr Ile Trp Gln Ile Trp Glu Asn
 85 90 95
 Gly Thr Ile Val Asn Pro Lys Ser Ser Leu Val Leu Gly Ala Ala Ser
 100 105 110

Gly Ser Ser Arg Thr Thr Leu Thr Val Gln Thr Gln Ala Tyr Ser Leu
 115 120 125

Gly Gln Gly Trp Leu Ala Ser His Asp Thr Ala Pro Arg Glu Val Thr
 130 135 140

Ile Tyr Gly Phe Arg Asp Leu Cys Met Glu Ala Asn Gly Ser Ser Val
 145 150 155 160

Xaa Val Glu Thr Cys Val Ser His Lys Gln Asn Gln Lys Trp Ala Leu
 165 170 175

Tyr Gly Asp Gly Ser Ile Arg Pro Lys Gln Asn Arg Asn Gln Cys Leu
 180 185 190

Thr Cys Gln Lys Asp Ser Val Ser Thr Val Ile Asn Ile Val Ser Cys
 195 200 205

Ser Ala Gly Ser Ser Gly Gln Arg Trp Val Phe Thr Asn Lys Gly Thr
 210 215 220

Ile Leu Asn Leu Lys Asn Gly Leu Val Leu Asp Val Ala Gln Ser Asn
 225 230 235 240

Pro Ser Leu Arg Arg Ile Ile Ile Tyr Pro Ala Thr Gly Lys Pro Asn
 245 250 255

Gln Met Trp Leu Pro Val Pro
 260

<210> 13

<211> 357

<212> DNA

<213> Viscum album coloratum

<221> misc_feature

<223> any set containing "n"=X, X=any amino acid

<400> 13

gccagattca atcccatent gtggaggctt cgccggcaaa ttaacagtgg ggagtcntct 60

ccaccaaaaca tgtacatgct cgagctggag acgagttggg gtcgacaatc cacccaagtc 120

cagcagtcca aggatggcat ttttaatacc caaataagat tgcagatttc cgccggtaac 180
 tttgtgacgn tgagcaatgt tcgcgacgtg atctccagct tggcgatcat gttgttcgaa 240
 tgcagtggtc ggccattctc ctctctcgac cacccttcgc cgctgctcct aaggtcgcgc 300
 gtggatgcgg ccaacgatgt cacctgcact nttccgaac ccaccgtgcg catcgta 357

<210> 14
 <211> 119
 <212> PRT
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 14

Ala	Arg	Phe	Asn	Pro	Ile	Xaa	Trp	Arg	Leu	Arg	Arg	Gln	Ile	Asn	Ser
1		5			10				15						
Gly	Glu	Ser	Ser	Pro	Pro	Asn	Met	Tyr	Met	Leu	Glu	Leu	Glu	Thr	Ser
	20				25			30							
Trp	Gly	Arg	Gln	Ser	Thr	Gln	Val	Gln	Gln	Ser	Lys	Asp	Gly	Ile	Phe
	35			40			45								
Asn	Thr	Gln	Ile	Arg	Leu	Gln	Ile	Ser	Ala	Gly	Asn	Phe	Val	Thr	Xaa
	50			55			60								
Ser	Asn	Val	Arg	Asp	Val	Ile	Ser	Ser	Leu	Ala	Ile	Met	Leu	Phe	Glu
65		70			75				80						
Cys	Ser	Gly	Arg	Pro	Phe	Ser	Ser	Leu	Asp	His	Pro	Ser	Pro	Leu	Leu
	85			90				95							
Leu	Arg	Ser	Val	Val	Asp	Ala	Ala	Asn	Asp	Val	Thr	Cys	Thr	Xaa	Ser
	100			105				110							
Glu	Pro	Thr	Val	Arg	Ile	Val									
	115														

<210> 15

<211> 522
 <212> DNA
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 15

tacacagatc tggagcgata cgccgggtcat agggaccaga tccctctggg tatagaggaa 60
 ctcatccaat ccgtctcggc gcttcgttat ccaggcggca gcacccgggc ccaagctcgt 120
 tcccttataa tcttcattca gatgatctcc gaggccgcga gattcaatcc catcttttgg 180
 agggctcgcc aatacattaa cagcggggag tcatttcttc ccgacatgta catgctcgag 240
 ctggagacta gttggggcca acaatccacg caagtccagc agtctacgga tggcgttttt 300
 aataacccat ttcggttggg tatatccacc ggtaacttcg tgacgttgag caatgttcgc 360
 gacgtgatcg ccagcttagc gatcatgttg ttgtatgta gggaccgacc atcttcctcc 420
 gacgtgcgct attggccgct ggtcatacga cccgtcttgg aaaatagcgg cgccgtcgac 480
 gatgttacct gcaactgttc cgaaccacc gtgcgcatcg ta 522

<210> 16
 <211> 174
 <212> PRT
 <213> Viscum album coloratum
 <221> misc_feature
 <223> any set containing "n"=X, X=any amino acid

<400> 16

Tyr Thr Asp Leu Glu Arg Tyr Ala Gly His Arg Asp Gln Ile Pro Leu
 1 5 10 15
 Gly Ile Glu Glu Leu Ile Gln Ser Val Ser Ala Leu Arg Tyr Pro Gly
 20 25 30
 Gly Ser Thr Arg Ala Gln Ala Arg Ser Leu Ile Ile Leu Ile Gln Met

15